We claim:

1. In a switching device, a method of communicating data packets from sending ports to destination ports, the method comprising:

storing in a first stage queue packet-related data from a sending port;

determining from the packet-related data which destination ports are to receive the packet-related data in the first stage queue;

storing in a second stage queue associated with each determined destination port the packet-related data from the first stage queue; and

using the packet-related data in the second stage queue to complete the communication of the data packet from the sending port to each determined ~~destination port.~~

2. The method of claim 1 wherein the packet-related data is a pointer to memory and a list of destination ports.

3. The method of claim 1 including sending the packet-related data from the sending port to the first stage queue.

4. The method of claim 1 wherein the first stage queue includes multiple first queues, and the step of storing the data in the first stage queue comprises storing the data in a specific first queue based on a characteristic of the packet.

5. The method of claim 1 wherein the packet characteristic is priority.

6. The method of claim 1 wherein the packet characteristic is network protocol type.

7. The method of claim 1 wherein the packet characteristic is type of service.

8. The method of claim 1 wherein the packet characteristic is other than whether the packet is a unicast or multicast type.

9. The method of claim 1 wherein each second stage queue includes multiple second queues, and the step of storing the data in the second stage queue comprises storing the data in a specific second queue based on a characteristic of the packet.

10. The method of claim 1 wherein the packet-related data is a data packet.

11. The method of claim 1 wherein the switching device uses a shared memory for communicating data packets from sending ports to destination ports, and the step of using the packet-related data in the second stage queue to complete the communication of the data packet from the sending port to each determined destination port comprises using the data to obtain a copy of the data packet from the shared memory.

12. The method of claim 1 wherein the switching device uses a crossbar matrix for communicating data packets from sending ports to destination ports, and the step of using the packet-related data in the second stage queue to complete the communication of the data packet from the sending port to each determined destination port comprises using the data to form connections in the matrix so as to communicate simultaneously a copy of the data packet from the sending port to each of the determined destination ports.

13. In a switching device, apparatus for communicating data packets from sending ports to destination ports, comprising:

a first stage queue storing packet-related data from a sending port; and

a second stage queue associated with each of a set of destination ports storing the packet-related data from the first stage queue.

14. The apparatus of claim 13 including means for determining from the packet-related data which destination ports are to receive the packet-related data in the first stage queue.

15. The apparatus of claim 14 including means for using the packet-related data in the second stage queue to complete the communication of the data packet from the sending port to each determined destination port.

16. The apparatus of claim 13 including address resolution logic sending the packet-related data from the sending port to the first stage queue.

17. The apparatus of claim 13 wherein the first stage queue includes multiple first queues, the data stored in a specific first queue based on a characteristic of the packet.

18. The apparatus of claim 13 wherein each second stage queue includes multiple second queues, the data stored in a specific second queue based on a characteristic of the packet.

19. The apparatus of claim 13 wherein the switching device uses a shared memory for communicating data packets from sending ports to destination ports.

20. The apparatus of claim 13 wherein the switching device uses a crossbar matrix for communicating data packets from sending ports to destination ports.

21. In a switching device, apparatus for communicating data packets from sending ports to destination ports, comprising:

means for storing in a first stage queue packet-related data from a sending port;

means for determining from the packet-related data which destination ports are to receive the packet-related data in the first stage queue;

means for storing in a second stage queue associated with each determined destination port the packet-related data from the first stage queue; and

means for using the packet-related data in the second stage queue to complete the communication of the data packet from the sending port to each determined destination port.